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**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**Available online at: <http://www.iajps.com>**Review Article****A VERY DISTINCTIVE PLANT - CROCUS BANATICUS****Dr. R. B. Saxena**Drug Standardisation Research Section, Central Research Institute – Ayurveda, Aamkho ,
Gwalior –474 009 (India).**Abstract:**

The genus crocus L. consists currently of about 160 recognized species, small, corm bearing, perennial species having an old world distribution, primarily in mediterranean – west Europe and NW Africa to W China, with the center of species diversity on the Balkan Peninsula and in Turkey. Due to very dark form of crocus banaticus also called Romanian form. All crocus banaticus originated in Romania but this was raised from wild seeds. Due to distinctive plant, it creates its own sub- genus is the crocus sub-family known as crocoideae and sub-genus crociris. History, botany, taxonomy, infra-specific taxa, distribution, ecology, phenology, description, chromosome counts, etc. are provided with key to their identification.

Key words : *Crocus, Geographic area. Botany, Chromosome, Phenology, Crociris, Banaticus.*

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INTRODUCTION [1-4]:

The genus *crocus* L. consists currently of about 160 recognized species. Occurring from W Europe and NW Africa to W China, with the center of species diversity on the Balkan Peninsula and in Turkey. Mathew divided into sub- genera (not supported recent phylogenetic research) and two-sections and sub-section divided into 15 series. Later, one more series was added and one series was moved to another section. The species discovered since than have been integrated **in to** this classification, distributed sea (Portugal and W Morocco) , Europe to W China and Mongolia. The center diversity of the genus in Turkey with more than 70 taxa and

Greece with 33 taxa. The study shows ` no support for a system of section as currently defined, although despite the many in-consistencies between Mathew classification and current hypothesis`. *Crocus banaticus* originated in Romania and raised from wild seeds. In northern Germany it is wild and possible naturalized. A very distinctive plant with a flowers whose outer petals can reflex (fold back) , anthers open introsely i.e. they open in towards the style and all other crocus open extrosely, leading some early botanists to call the plant crocus ` Iridiflorus`. It creates own sub-family known as crocoideae and sub-genus crociris.

BOTANY [5,6] :

The taxonomic classification of the *crocus banaticus* as follows :

1.	Domain	Eukaryota
2.	Kingdom	Plantae
3.	Sub-kingdom	Viridaeophyta
4.	Phylum	Tracheophyta
5.	Sub-phylum	Euphyllophytina
6.	Infra-phylum	Radiatopses
7.	Class	Spermatopside
8.	Sub-class	Liliidae
9.	Super – order	Lilianaes
10.	Order	Asparagals
11.	Family	Iridaceae (Iris)
12.	Sub-family	Crocoideae
13.	Genus	Crocus
14.	Sub-genus	Crociris
15.	Species	<i>Banaticus</i>

Genus *crocus* : **Herb** : small, perennial, cormous, deciduous. **Corm** : usually symmetrical, enclosed by several tunics of variable texture and colour. **Cataphylls**: up to 5, sheathery the aerial shoot. **Leaves**: appearing with or after the flowers, all basal, flat or channeled (canaliculated) on the upper surface, lower surface usually strong keeled usually with entire margins and parallel venation, 5- 8 cm. high. **Flowers** : scape absent, one to several, each on a short, subterranean pedicel which is sometimes subtended by a membranous, sheathing prophyll. **Bract** : membranous. **Bracteole**: similar, or reduced or absent. **Perianth** : regular, tube long and narrow, glabrous or with ring of hairs in the throat at the intertion of the filaments, segments usually sub-equal. **Anthers**: usually extrose. **Style**: 3 lobed to multifid. **Ovary**: sub-teranean. **Fruits**: capsule cylindrical or ellipsoid, maturing or above ground level by elongation of pedicel. **Seeds** : numerous, usually globose or ellipsoid , brownish or reddish, with a strophiole.

Sub - Genus: The small inner tepals are surrounded by three larger tepals, unlike the more symmetrical *crocus* species found out-side of the sub-genus.

Section *crocus*: species with a basal prophyll.

Crocus banaticus J. Gay [7-25]

History : This is a very dark form of *crocus banaticus* called Romanian form. All *crocus banaticus* originated in Romania but this one was raised from wild seed. This species from Romania blooms in early fall before its leaves. A very distinctive plant with a flowers whose outer petals can reflex (fold back) leading some early botanists to call the plant *crocus` Iridiflorus`*. It creates its own sub-genus is the *crocus* sub-family known as *crociris*.

Synonyms:

Crocus byzanthinus Herb.

Crocus herbertianus Korn.

Crocus iridiflorus Heuff ex Rchb.

Crocus nudiflorus Schult [Illegitimate].

Botanical name: *Crocus banaticus*.

Scientific name: *Crocus banaticus*.

Common name: Byzantine crocus, Iris-flowered crocus, Autumn crocus, *Crocus*.

Herb: small, perennial, cormous, endemic, deciduous. **Plant range:** E Europe. **Found:** E Europe Ukraine, SE Europe Romania, and Yugoslavia. **Native:** Balkans, particular only to Serbia, Romania, Yugoslavia, SW Ukraine, W Europe Russia and in meadows and deciduous.

Habit: tufted. **Native climate:** cool and damp summer and winter. **Wild habitat:** forests and grass-land between them, six of deciduous tree. **Grow:** prefers semi-shaded places, grow in Oat and beech.

Height: 10 – 12 cm. **Spread:** 0-0.1 m., **Time of ultimate height:** 2-5 years. **Life form:** tuber geophytes. **Distribution:** Romania, Yugoslavia, NE, NW Ukraine, NE Serbia, in northern Germany, it is wild, and possibly naturalized. **Altitude:** 130 – 700 m. asl. **Corm** : 0.0 1 m., rounded, slightly flattened at the top and bottom, its width varies form 14 – 16 mm., height 8-9 m., occasionally some centric, flate base ranging obliquely in stead of horizontal, with a larger development of the corm mass on one side of the axis than other. This is a constant feature in small seedling corms, the mass of which is their earliest stages are developed on one side of the axis of growth, corm consists of almost homogenous mass of cellular tissue (woody fibre) and starch, perennial growing to 4 cm. , tunic finely fibrous, the parallel fibres at the base, reticulate at the apex. **Leaves** :

grass-like, lacking the silver stripe normally associated with the enus, 1-3, 5-7(-10) mm wide, absent at anthesis, green, dark to grow with an indistinct central stripe, appearing after the flowers, start to grow in the spring, leaves and fruits appear next spring, the sprout is very weak and brittle during the flowers, mechanical strength is given by the associated leaves. **Flowers:** solitary, fragrance, 10-13 cm high, outside those big, with very small inner petals that resemble much of an Iris from *crocus* flowers. It is higher than the outer ones are dark inside. There are also many beautiful albino widely available cultural forms, reflex strong sun. **Throat:** lilac, glabrous. **Propyl:** present. **Bracteole:** absent. **Bract:** membranous, green at the apex, well-exserted from the cataphylls. **Perianth tube:** 10 -21 cm., white at base, lilac at the apex. **Filament:** white. **Segments:** very unequal, the inner 2.3 – 3 x 1.3 – 2.5

cm., oblanceolate to obovate, acute. **Anthers:** yellow, open intorsely i.e. they open to-wards the style – all other crocus open extrosely or outwards. **Pollens :** yellow. **Styles:** lilac, exceeding the stamens, dissected into many slender branches (number of branches up to 50). **Capsule:** 1.2 – 1.5 cm. ellipsoid, each has three cavities, seeds arranged in two rows. **Seeds:** reddish brown, elliptical, lemon line acuminate are at the ends, 4-4.5 mm. in length, with distinct strophiole. $2n = 26$.

Phenology : October – November.

Characteristics: (i) It is not difficult to rise from seeds. (ii) Ornamental for lawns, flower gardens and rock group. (iii) least since 1594 in culture. (iv) Pollination by bee.

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